

## REMARKS

Claims have been amended. Claim 34 has been cancelled. Support for the claim amendments is found in the Application at, for example, p. 8, // 2-7, p. 11, // 4-22, p. 13, // 7-16, and in Figs. 1, 3-5. The language in some dependent claims has been amended to introduce proper antecedent basis. One sheet of drawings with new Figs. 10-12 is attached herewith as a paper entitled Proposed Drawing Corrections. Support for these figures is provided in such paper. New paragraphs have been added in the specification according to the two new figures being introduced. No new matter has been added.

Applicant submits this Amendment "D" and Response for the Examiner's consideration. Reexamination and reconsideration of the application, as amended, in view of the following remarks are respectfully requested.

### **1. STATUS OF THE CLAIMS**

Claims 1-61 were presented for examination; claims 1-61 stand rejected under 35 U.S.C. § 103(a) and pending in the application.

### **2. RESPONSE TO REJECTIONS**

#### **2.1. Claim Rejections Under 35 U.S.C. § 112 ¶ 2**

Claims 1-61 stand rejected and the Office Action asserts that the recitation of "unimbedded into said substrate" in independent "claim[s] 1, 9, 19, 35, 42, 47, and 57 [] is unclear". Office Action, p. 2, item 1. Furthermore, the Office Action asserts that if the quoted recitation means that "there is no recess in the substrate", then "the limitations in claims 8, 18, 23, 34, 41, 45, 50, 55, and 60 are improperly claimed." Office Action, p. 2, item 1. Applicant will show that, according to the

plain meaning of the terms "imbedded" and "unimbedded", the recited limitation is clear and well-defined, that it has support in the Application and drawings as filed, and that such meaning does not conflict with the recitations in claims 8, 18, 23, 41, 45, 50, 55.

As shown in the dictionary material attached to the present paper (WEBSTER'S DELUXE UNABRIDGED DICTIONARY, pp. 591, 908, 1984, and cover page), the terms "imbed" and "embed" have identical meaning which, as applied to material entities, is to fix something within a surrounding mass. Examples given in the attached dictionary copies include "to set (flowers, etc.) in earth", "to set or fix firmly in a surrounding mass; as, the knife was embedded in the wood" (italicization in the original omitted), and "to fix in the mind, memory, etc." *Id.*, at 591. As also shown in the attached dictionary copies, the prefix "un" means "not, lack of, the opposite of, as in unlucky, untruth, unhappy." (Italicization in the original omitted). The same material supplements the description of the effect of the prefix "un" by indicating that "un" is "a prefix meaning back and generally added to verbs to express reversal of the action denoted by the verb, as in unarm, undo, unlock, or to nouns to form verbs indicating a release from the state expressed by the noun, as in unbosom. Sometimes it has a mere intensive force, as in unloosen." (Italicization in the original omitted). *Id.*, at 1984.

The terms that are related by "unimbedded" in the recited claim language are a substrate and a semiconductive device. For example, claim 1 recites, *inter alia*, "the substrate having an outermost surface and being configured for receiving thereon a semiconductive device such that said semiconductive device lies at least in part on said outermost surface and is unimbedded into said substrate". Variations of the same language are found in the remaining independent claims; this language is not copied here for brevity, but it is found in the versions of the pending claims provided in this paper.

This language has full support in the Application as filed. By way of illustration, but not as an interpretive limitation, Figs. 6-8 show illustrative embodiments in which a semiconductive device, such as semiconductive devices 16 and 58, is at least in part on the outermost surface of a substrate, such as substrates 18 and 60, and the semiconductive device is unimbedded into the substrate because the semiconductor device will not be within the substrate even when contact is established between a semiconductive device's terminal and a receiving end of a conductor on the substrate, such as the terminal/receiving end pairs 30/28 and 68/66.

In light of the plain meaning of the term "unimbedded" and in light of the content of the present Application, Applicant respectfully submits that one possessing the ordinary skill in the art would interpret the claim language as setting out and circumscribing the claimed subject matter with a reasonable degree of clarity and particularity. *See* M.P.E.P. § 2173, 2100-194 (Aug. 2001) (providing that definiteness of claim language must be analyzed, not in a vacuum, but in light of the content of the particular application disclosure, the teachings of the prior art, and the claim interpretation that would be given by one possessing the ordinary level of skill in the pertinent art at the time the invention was made). Applicant respectfully requests the reconsideration and withdrawal of these rejections.

The conjecture manifested in the Office Action regarding the propriety in the language of claims 8, 18, 23, 34, 41, 45, 50, 55, and 60 is also addressed by the remarks set forth above and it should now be clarified in light of the same remarks. Furthermore, Applicant notes that the language in these dependent claims relates a receiving end of a conductor with a recess in a substrate. It follows from the remarks provided above that a receiving end of a conductor disposed within a recess in the substrate is not an arrangement of elements that conflicts in any way with the semiconductive device being unimbedded into the substrate.

The Office Action asserts that "it is unclear what 'an adhesive' represent[s]" with respect to the recitation in dependent claims 6, 16, and 32. The word "adhesive" is a plain English word and, as shown in the following subsection 2.2, it is extensively characterized in the Application as filed. In light of these remarks, Applicant respectfully submits that a person possessing the ordinary level of skill in the art will clearly ascertain the scope of these claims and that the recitation of the term "adhesive" does not render them unclear.

Applicant respectfully submits that the rejected claims comply with 35 U.S.C. § 112 ¶ 2, and reconsideration and withdrawal of these rejections are respectfully requested.

**2.2. Claim Rejections Under 35 U.S.C. § 112 ¶ 1**

Dependent claims 6, 16, and 32 stand rejected and the Office Action asserts that "the limitations of [these] claims [] do not have support in the specification." Office Action, p. 2, item 2. These claims have been amended to more clearly recite the adhesive therein. Support for these amendments is found at least in the same portions of the Application referred to above in the general Remarks, and also in the remarks below.

The cites and references to the written description provided herein are meant to be illustrative of the support to the claim language, and such cites and references are not provided as interpretive limitations. The Application as filed at, for example, p. 11, ll. 4-15, provides, *inter alia*, examples of adhesives that can be used in embodiments of semiconductive device/interposer couplings, examples of how to use such adhesives, properties of such adhesives, and functionalities of such adhesives. Furthermore, the Application as filed, at for example, p. 13, ll. 7-16 provides, *inter alia*, additional examples of adhesives and their use in semiconductor device/interposer couplings.

"To satisfy the written description requirement, a patent specification must describe the claimed invention in sufficient detail that one skilled in the art can reasonably conclude that the

inventor had possession of the claimed invention.” M.P.E.P. § 2163.I, p. 2100-155 (Aug. 2001). “The fundamental factual inquiry is whether the specification conveys with reasonable clarity to those skilled in the art that, as of the filing date sought, applicant was in possession of the invention as now claimed.” M.P.E.P. § 2163.I.B, p. 2100-158 (Aug. 2001). *See also* M.P.E.P. § 2163.02, p. 2100-167 (Aug. 2001). “[A] satisfactory description may be in the claims or any other portion of the originally filed specification” and “[a]n applicant shows possession of the claimed invention by describing the claimed invention with all of its limitations using such descriptive means as words, structures, figures, diagrams, and formulas that fully set forth the claimed invention.” M.P.E.P. § 2163.I, p. 2100-155 (Aug. 2001) (citing *Lockwood v. American Airlines, Inc.*, 107 F.3d 1565 (Fed. Cir. 1997)). Furthermore, the “subject matter of the claim need not be described literally (i.e., using the same terms or *in haec verba*) in order for the disclosure to satisfy the description requirement.” M.P.E.P. § 2163.02, p. 2100-167 (Aug. 2001). *See also*, M.P.E.P. § 2163.I.B, p. 2100-157 (Aug. 2001).

In light of the illustrative legal and procedural authority concerning the written description requirement given above, and also in light of the illustrative cites to the written description, Applicant respectfully submits that these claims comply with 35 U.S.C. § 112 ¶ 1, and reconsideration and withdrawal fo these rejections are respectfully requested.

### **2.3. Claim Rejections Under 35 U.S.C. § 102**

Claims 1-5, 7, 9, 12-15, 17, 19-21, 28-31, 33, 35, 38-40, 42-44, 46-49, 51-54, 56-59 and 61 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Hembree, *et al.*, U.S. Pat. No. 5,424,652 (hereinafter “Hembree”).

The present independent claims recite, *inter alia*, and with some language variations in each individual claim, “a connector for holding the semiconductive device stationary relative to the

interposer by contact engagement with said semiconductive device and with said substrate, wherein said contact engagement is effectuated directly or through an adhesive in contact with said connector". See, for example, claim 1. This recitation is incorporated into the respective dependent claims.

Because Hembree does not disclose at least a connector as recited in the present claims, Hembree does not teach or disclose each and every feature recited in the present claims. As stated by the Federal Circuit,

Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim.

*Lindermann Maschinenfabrik GmbH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 1458, 221 U.S.P.Q. 481, 485 (Fed. Cir. 1984). See also M.P.E.P. § 2131, pp. 2100-54, 55 (Rev. 1, Feb. 2000) (quoting, in addition, *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987), and *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989)). Consequently, Hembree does not anticipate systems as claimed here. Applicant respectfully submits that the pending claims patentably distinguish over Hembree, and reconsideration and withdrawal of this rejection is respectfully requested.

#### **2.4. Claim Rejections Under 35 U.S.C. § 103(a)**

Claims 6, 10-11, 16, 21, 24-27, 32, 36-37 stand rejected under 35 U.S.C. § 103(a) over Hembree in view of Pryor, *et al.*, U.S. Pat. No. 4,712,161 (hereinafter "Pryor"), and Gochmour, *et al.*, U.S. Pat. No. 5,678,301 (hereinafter "Gochmour"). The grounds for rejection as set forth in the Office Action are addressed hereinbelow.

The present patent application is a divisional of, and claims priority to, U.S. Patent Application Serial No. 09/123,633, filed 07/28/98. A copy of the assignment document of this

parent application, recorded at the U.S. Patent and Trademark Office at reel/frame 9357/0232, is attached hereto showing assignment by the inventive entity to Micron Technology, Inc., which is listed as the assignee of Gochnour.

Given the effective filing date of the present application, Gochnour is disqualified under 35 U.S.C. § 103(c) from being prior art against the presently claimed invention because the subject matter disclosed in Gochnour and the presently claimed invention were, at the time the invention was made, commonly owned, or subject to an obligation of assignment to the same person.

Because Gochnour may not be cited as prior art against the presently claimed invention, Gochnour does not support any rejection under 35 U.S.C. § 103(a), whether alone or combined with another reference, even if the references were otherwise combinable. For the foregoing reasons, Applicant respectfully requests reconsideration and withdrawal of this rejections.

As reasoned in turn below, Hembree and Pryor do not establish a *prima facie* case of obviousness regarding the present claims.

It has been shown in the previous subsection 2.3 that Hembree does not teach all the claim limitations of the present claims. The recited claim limitations relate to structural elements of the presently claimed systems that are different in number and configuration from those disclosed in Hembree. For example, the limitations of the connector recited in the present claims are not taught or suggested by Hembree, that shows embodiments with a different connector configuration. In addition, the recited limitations concerning the relative configuration of the substrate, the semiconductive device and the connector in the present claims is not taught or suggested in Hembree, which shows relative configurations of these three elements that are different in arrangement, number of elements involved, and connectivities from those recited in the present claims.

Pryor discloses hybrid and multi-layer circuitry. The teachings of this reference are not directed to systems for electrically coupling a semiconductive device to an electrical apparatus, and this reference does not overcome any of the limitations and lack of teachings and suggestions that characterize Hembree when considered in light of the present claims.

Because of differences and limitations such as those described hereinabove, Hembree and Pryor have not suggested the claimed systems, and it may not be asserted that the teachings in these references are sufficient for one of ordinary skill in the art to make the substitutions, combinations or other modifications that are necessary to arrive to the systems claimed in the pending claims. Limitations and differences such as those set forth hereinabove also demonstrate that the cited references do not teach or suggest all the claim limitations in the rejected claims. However, this teaching is required for establishing a *prima facie* case of obviousness. See M.P.E.P. § 2142, pp. 2100-121, -122 (Aug. 2001) (citing *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991), providing three requirements for establishing a *prima facie* case of obviousness including the requirement that "the prior art reference ... must teach or suggest all the claim limitations"). In light of at least these differences and limitations, neither Hembree nor Pryor provides the suggestion and the expectation of success that must be found in the prior art rather than in applicant's disclosure. See *In re Dow Chemical Co.*, 837 F.2d 469, 473 (Fed. Cir. 1988). See also M.P.E.P. §§ 2142-43, p. 2100-121, -122 (Aug. 2001) (providing the basic requirements of a *prima facie* case of obviousness). Furthermore, no art of record provides any suggestion or motivation for modifying the teachings in Hembree and Pryor to arrive at the claimed systems. See *id.*, (providing the basic requirements of a *prima facie* case of obviousness).



Consequently, Applicant respectfully submits that neither Hembree nor Pryor supports a *prima facie* case of obviousness regarding the present claims. Applicant respectfully requests the reconsideration and withdrawal of this rejection.

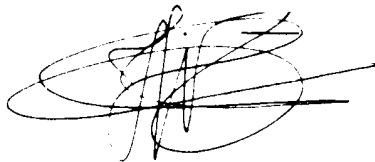
3. CONCLUSIONS

In view of the above, Applicant respectfully maintains that the present application is in condition for allowance. Reconsideration of the rejections is requested. Allowance of the pending claims at an early date is solicited.

In the event that the Examiner finds any remaining impediment to a prompt allowance of this application which could be clarified by a telephonic interview, or which is susceptible to being overcome by means of an Examiner's Amendment, the Examiner is respectfully requested to initiate the same with the undersigned attorney.

Dated this 24<sup>th</sup> day of January 2002.

Respectfully submitted,

A handwritten signature in black ink, appearing to be "J. Juanós i Timoneda", written over a large, loopy circular flourish.

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**Marked up Version of the Pending Claims Under 37 C.F.R. § 1.121(c)(1)(ii):**

Applicant submits the following marked up version only for claims being changed by the current amendment, wherein the markings, if any, are shown by brackets (for deleted matter) and/or underlining (for added matter).

1. (Four Times Amended) A system for electrically coupling a semiconductive device to an electrical apparatus, the system comprising:

an interposer, the interposer comprising:

a substrate comprised of an electrically insulating ceramic material, the substrate having an outermost surface and being configured for receiving thereon a semiconductive device such that said semiconductive device lies at least in part on said outermost surface and is unimbedded into said substrate; and

a plurality of electrical conductors on the substrate, each electrical conductor having a receiving end for connecting to the semiconductive device at electrically conductive terminals of said semiconductive device, and a terminal end for connecting to an electrical apparatus, such that electrical circuitry within the semiconductive device is electrically coupled to the electrical apparatus when the semiconductive device is connected to said plurality of receiving ends of the electrical conductors and said plurality of terminal ends of the electrical conductors are connected to the electrical apparatus; and

a connector for holding the semiconductive device stationary relative to the interposer by contact engagement with said semiconductive device and with said substrate, wherein said contact engagement is effectuated directly or through an adhesive in contact with said connector, and wherein at least some of said terminals are located in the region between said semiconductive device and said outermost surface of said substrate.

6. (Once Amended) A system as recited in claim 1, [wherein the connector comprises an adhesive] further comprising an adhesive placed on at least a portion of said outermost surface and between said at least a portion of said outermost surface and said semiconductive device.

9. (Four Times Amended) A system for testing a semiconductive device, the system comprising:

an electrical testing apparatus;

a semiconductive device having an electrical circuitry therein electrically connected to an electrical lead projecting therefrom;

an interposer, the interposer comprising:

a substrate comprised of an electrically insulating material selected from the group consisting of glass, alumina, glass ceramic, nonmetallic nitride, aluminum nitride, nonmetallic carbide, and mixtures and derivatives thereof, the substrate having an outermost surface and being configured for receiving thereon a semiconductive device such that said semiconductive device lies at least in part on said outermost surface, and is unimbedded into said substrate; and

an electrical conductor on the substrate, the electrical conductor having a receiving end for connecting to the electrical lead of the semiconductive device and a terminal end for connecting to the electrical testing apparatus, whereby the semiconductive device is electrically coupled to the electrical testing apparatus when the electrical lead of the semiconductive device is in contact with the receiving end of the electrical conductor and the terminal end of the electrical conductor is in electrical communication with the electrical testing apparatus, wherein said receiving end and said terminal lead are connected and free of contact

engagement with any other element other than said substrate and said  
semiconductive device; and

a connector for holding the semiconductive device stationary relative to the  
interposer by contact engagement with said semiconductive device and with said  
substrate, wherein said contact engagement is effectuated directly or through an adhesive  
in contact with said connector.

10. (Twice Amended) The system as defined in Claim 9, [further comprising:]  
wherein the [a] connector [for holding] holds the electrical lead of the semiconductive device  
towards and in contact with the receiving end of the electrical conductor, the connector being  
composed of copper and alloys thereof, wherein the electrical lead is held towards and in contact  
with the receiving end by biasing said [connector] semiconductive device with said  
[semiconductive device] connector against said interposer, and wherein said semiconductive  
device and said connector are in contact engagement with each other.

16. (Once Amended) A system as recited in claim 10, [wherein the connector  
comprises an adhesive.] further comprising an adhesive placed on at least a portion of said  
outermost surface and between said at least a portion of said outermost surface and said  
semiconductive device.

19. (Four Times Amended) A system for electrically coupling a semiconductive device to an electrical apparatus, the system comprising:

an interposer, the interposer comprising:

a substrate comprised of an electrically insulating, ceramic material, the substrate having an outermost surface being configured for receiving thereon a semiconductive device such that said semiconductive device lies at least in part on said outermost surface and is unimbedded into said substrate; and

an electrical conductor on the substrate, the electrical conductor having a receiving end for connecting to the semiconductive device at electrically conductive terminals of said semiconductive device, and a terminal end for connecting to the electrical apparatus, wherein at least some of the terminals are located in the region between said semiconductive device and said outermost surface of said substrate; and

a connector in contact engagement with the semiconductive device and with said substrate for holding the semiconductive device stationary relative to the interposer by holding said semiconductive device against said interposer, wherein said contact engagement is effectuated directly or through an adhesive in contact with said connector.

32. (Once Amended) A system as recited in claim 19, [wherein the connector comprises an adhesive.] further comprising an adhesive placed on at least a portion of said outermost surface and between said at least a portion of said outermost surface and said semiconductive device.

33. (Once Amended) A system as recited in claim 19, wherein [at least one of said] the receiving end[s] projects from the substrate.



35. (Thrice Amended) A system for electrically coupling a semiconductive device to an electrical apparatus, the system comprising:

an interposer, the interposer comprising:

a substantially homogeneous, substantially planar sheet having an outermost surface and comprised of an electrically insulating, inorganic ceramic material, said sheet being configured for receiving thereon a semiconductive device such that said semiconductive device lies at least in part on said outermost surface and is unimbedded into said substrate; and

an electrical conductor on the sheet, the electrical conductor having a receiving end for connecting to a semiconductive device at electrically conductive terminals of said semiconductive device and a terminal end for connecting to an electrical apparatus, such that the semiconductive device is electrically coupled to the electrical apparatus when the semiconductive device is connected to the receiving end of the electrical conductor and the terminal end of the electrical conductor is connected to the electrical apparatus, wherein at least some of said terminals are located in the region between said semiconductive device and said outermost surface of said substrate; and

a connector for holding the semiconductive device stationary relative to the interposer, wherein said connector is in contact engagement with said semiconductive device, and with said sheet, wherein said contact engagement is effectuated directly or through an adhesive in contact with said connector.

40. (Once Amended) A system as recited in claim 35, wherein [at least one of said] the receiving end[s] projects from the substrate.

41. (Once Amended) A system as recited in claim 35, wherein [at least one of said] the receiving end[s] is disposed within a recess in the substrate.

42. (Thrice Amended) A system for electrically coupling a semiconductive device to an electrical apparatus, the system comprising:

an interposer, the interposer comprising:

a substantially homogeneous, substantially planar sheet having an outermost surface and composed of an electrically insulating material selected from the group consisting of glass ceramics, devitrified ceramics, vitro ceramics, alumina, single oxide ceramics, and mixed oxide ceramics, and mixtures and derivatives thereof, said sheet being configured for receiving thereon a semiconductive device such that said semiconductive device lies at least in part on said outermost surface and is unimbedded into said substrate; and

an electrical conductor on the sheet, the electrical conductor having a receiving end for connecting to the semiconductive device at electrically conductive terminals of said semiconductive device and a terminal end for connecting to the electrical apparatus, such that the semiconductive device is electrically coupled to the electrical apparatus when the semiconductive device is connected to the receiving end of the electrical conductor and the terminal end of the electrical conductor is connected to the electrical apparatus, wherein at least some of said terminals are located in the region between said semiconductive device and said outermost surface of said substrate; and

a connector for holding the semiconductive device stationary relative to the interposer, wherein said connector is in contact engagement with said semiconductive device and with said sheet, wherein said contact engagement is effectuated directly or through an adhesive in contact with said connector.

44. (Once Amended) A system as recited in claim 42, wherein [at least one of said] the receiving end[s] projects from the substrate.

45. (Once Amended) A system as recited in claim 42, wherein [at least one of said] the receiving end[s] is disposed within a recess in the substrate.

47. (Thrice Amended) A system for electrically coupling a semiconductive device to an electrical apparatus, the system comprising:

an interposer, the interposer comprising:

a substantially homogeneous, substantially planar sheet having an outermost surface and composed of an electrically insulating material selected from the group consisting of alumina, alumina with silica, alumina with silicates, alumina with derivatives of silicates, and mixtures and derivatives thereof, said sheet being configured for receiving thereon a semiconductive device such that said semiconductive device lies at least in part on said outermost surface and is unimbedded into said substrate; and

an electrical conductor on the sheet, the electrical conductor having a receiving end for connecting to the semiconductive device at electrically conductive terminals of said semiconductive device and a terminal end for connecting to the electrical apparatus, such that the semiconductive device is electrically coupled to the electrical apparatus when the semiconductive device is connected to the receiving end of the electrical conductor and the terminal end of the electrical conductor is connected to the electrical apparatus, wherein at least some of said terminals are located in the region between said semiconductive device and said outermost surface of said substrate; and

a connector for holding the semiconductive device stationary relative to the interposer, wherein said connector is in contact engagement with said semiconductive device and with said sheet, wherein said contact engagement is effectuated directly or through an adhesive in contact with said sheet.

49. (Once Amended) A system as recited in claim 47, wherein [at least one of said] the receiving end[s] projects from the substrate.

50. (Once Amended) A system as recited in claim 47, wherein [at least one of said] the receiving end[s] is disposed within a recess in the substrate.

52. (Thrice Amended) A system for electrically coupling a semiconductive device to an electrical apparatus, the system comprising:

an interposer, the interposer comprising:

a substantially homogeneous, substantially planar sheet having an outermost surface and composed of an electrically insulating material selected from the group consisting of boron nitrides, aluminum nitrides, and mixtures and derivatives thereof, said sheet being configured for receiving thereon a semiconductor device such that said semiconductive device lies at least in part on said outermost surface and is unimbedded into said substrate; and

an electrical conductor on the sheet, the electrical conductor having a receiving end for connecting to a semiconductive device at electrically conductive terminals of said semiconductive device and a terminal end for connecting to an electrical apparatus, such that the semiconductive device is electrically coupled to the electrical apparatus when the semiconductive device is connected to the receiving end of the electrical conductor and the terminal end of the electrical conductor is connected to the electrical apparatus, wherein at least some of said terminals are located in the region between said semiconductive device and said outermost surface of said substrate; and

a connector for holding the semiconductive device stationary relative to the interposer, wherein said connector is in contact engagement with said semiconductive device and with said sheet, wherein said contact engagement is effectuated directly or through an adhesive in contact with said sheet.

54. (Once Amended) A system as recited in claim 52, wherein [at least one of said] the receiving end[s] projects from the substrate.

55. (Once Amended) A system as recited in claim 52, wherein [at least one of said] the receiving end[s] is disposed within a recess in the substrate.



57. (Thrice Amended) A system for electrically coupling a semiconductive device to an electrical apparatus, the system comprising:

an interposer, the interposer comprising:

a substantially homogeneous, substantially planar sheet having an outermost surface and composed of an electrically insulating material selected from the group consisting of oxides of silicon, silicate glass, and nucleated, substantially crystalline glass, and mixtures and derivatives thereof, said sheet being configured for receiving thereon a semiconductive device such that said semiconductive device lies at least in part on said outermost surface and is unimbedded into said substrate; and

an electrical conductor on the sheet, the electrical conductor having a receiving end for connecting to the semiconductive device at electrically conductive terminals of said semiconductive device and a terminal end for connecting to the electrical apparatus, such that the semiconductive device is electrically coupled to the electrical apparatus when the semiconductive device is connected to the receiving end of the electrical conductor and the terminal end of the electrical conductor is connected to the electrical apparatus, wherein at least some of said terminals are located in the region between said semiconductive device and said outermost surface of said substrate; and

a connector for holding the semiconductive device stationary relative to the interposer, wherein said connector is in contact engagement with said semiconductive device and with said sheet, wherein said contact engagement is effectuated directly or through an adhesive in contact with said connector.

59. (Once Amended) A system as recited in claim 57, wherein [at least one of said] the receiving end[s] projects from the substrate.

60. (Once Amended) A system as recited in claim 57, wherein [at least one of said] the receiving end[s] is disposed within a recess in the substrate.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of	Leonard E. Mess	)
		)
Serial No.	09/501,033	)
		)
Filed:	February 9, 2000	)Art Unit
		) 2858
For:	SYSTEM FOR TESTING A	)
	SEMICONDUCTOR DEVICE	)
		)
Examiner:	Vinh P. Nguyen	)
		)
Confirmation No.:	3325	)

ATTACHMENT TO AMENDMENT "D" AND RESPONSE

- Copies of four pages from Webster's Deluxe Unabridged Dictionary (cover and pp. 591, 908, and 1984).
- Copy of recordation material and assignment to Micron Technology, Inc., by Leonard E. Mess.

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# WEBSTER'S DELUXE UNABRIDGED DICTIONARY

SECOND EDITION

BASED UPON THE BROAD FOUNDATIONS LAID DOWN BY

Noah Webster

EXTENSIVELY REVISED BY THE PUBLISHER'S EDITORIAL STAFF UNDER THE GENERAL SUPERVISION OF

JEAN L. McKECHNIE

INCLUDING ETYMOLOGIES, FULL PRONUNCIATIONS, SYNONYMS, AND AN ENCYCLOPEDIC SUPPLEMENT OF  
GEOGRAPHICAL AND BIOGRAPHICAL DATA, SCRIPTURE PROPER NAMES, FOREIGN WORDS AND PHRASES,  
PRACTICAL BUSINESS MATHEMATICS, ABBREVIATIONS, TABLES OF WEIGHTS AND MEASURES, SIGNS AND  
SYMBOLS, AND FORMS OF ADDRESS

ILLUSTRATED THROUGHOUT

**DORSET & BABER**

## embowler

2. to deck in glaring colors; to display brilliantly; to make resplendent.

all future existences encased one within another.

2. to disembowel. [Rare.]

## imband

**im band'**, *v. t.*; imbanded, *pt., pp.*; imbanding, *ppr.* to form into a band or bands.  
**im ban'nēred**, *a.* furnished with banners.  
**im bārk'**, *v. t.* and *v. i.* same as *embark*.  
**im bār kā'tion**, *n.* same as *embarkation*.  
**im bār'ment**, *n.* same as *embarkment*.  
**im bārn'**, *v. t.*; imbarned, *pt., pp.*; imbarning, *ppr.* to put in a barn, as to store. [Obs.]  
 A fair harvest, well in and imbarned.  
 —Herbert.

**im bāse'**, *v. t.* same as *embase*.  
**im'bat**, *n.* a breeze that blows off the Mediterranean along the northern shore.  
**im bat'tle**, *v. t.* to furnish with battlements; usually spelled *embattle*.  
**im bat'tled**, *a.* same as *embattled*.  
**im'bē cile**, *a.* [Ofr. *imbecile*; L. *imbecillus*, *imbecillus*, feeble, weak.]

1. weak; feeble, destitute of strength, impotent. [Rare]  
 2. mentally feeble; of or showing deficient intellect.  
 3. very foolish or stupid.

**im'bē cile**, *n.* 1. a mentally deficient person with an intelligence quotient ranging from 25 to 50, a person mentally equal to a child between three and eight years old; *imbecile* is the second-lowest classification of mental deficiency, above *idiot* and below *moron*.  
 2. loosely, a very foolish or stupid person.  
**im'bē cile**, *v. t.* to weaken. [Obs.]

**im bē cil'i tāte**, *v. t.*; imbecilitated, *pt., pp.*; imbecilitating, *ppr.* to weaken; to make imbecile.

**im bē cil'i ty**, *n.* [Ofr. *imbecilete*; L. *imbecilitas* (-atis), weakness, feebleness of mind or body, from *imbecillus*, *imbecillus*, weak, feeble.]  
 1. the state of being an imbecile.  
 2. behavior like that of an imbecile; great foolishness or stupidity.  
 3. an imbecile act or remark.

**im bed'**, *v. t.* same as *embed*.  
**im bel'lic**, *a.* [L. *im-* priv., and *bellicus*, warlike] not warlike or martial. [Obs.]

**im bibe'**, *v. t.*; imbibed, *pt., pp.*; imbibing, *ppr.* [L. *imbibere*, to drink in; *in*, in, and *bibere*, to drink.]

1. to drink or drink in.  
 2. (a) to absorb (moisture); (b) to inhale.  
 3. to take into the mind and keep, as ideas, principles, etc.

**im bibe'**, *v. i.* to drink.  
**im bib'ēr**, *n.* one who or that which imbibes.  
**im bi'bition** (-bish'un), *n.* the act of imbibing.

**im bit'tēr**, *v. t.* same as *embitter*.  
**im bit'tēr ment**, *n.* same as *embitterment*.  
**im blāze'**, *v. t.* same as *emblaze*.  
**im bod'y**, *v. t.* and *v. i.* same as *embody*.  
**im bōld'en**, *v. t.* same as *embolden*.

**im bon'i ty**, *n.* [L.L. *imbonitas*, want of goodness, inconvenience; L. *in-* priv., and *bonitas*, goodness, from *bonus*, good.] lack of goodness. [Obs.]

**im bosk'**, *v. t.* [It. *imboscare*; *im-*, in, and *bosco*, a wood.] to conceal, as in bushes; to hide. [Obs.]

**im bosk'**, *v. i.* to lie concealed. [Obs.]  
**im bos'ōm** (-booz'), *v. t.* same as *embosom*.  
**im bos'tūre**, *n.* an embossed ornament. [Obs.]

**im bōw'**, *v. t.* same as *embow*.  
**im bow'el**, *v. t.* same as *embowel*.  
**im bow'ēr**, *v. t.* and *v. i.* same as *embower*.  
**im brāce'**, *v. t.* same as *embrace*.  
**im bran'gle**, *v. t.* same as *embrace*.

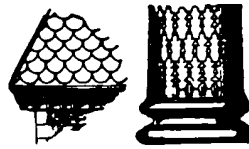
**im bri cāte**, *im bri cā ted*, *a.* [L. *imbricatus*, *pp.* of *imbricare*, to cover with gutter tiles, to form like a roof or gutter tile, from L. *imbrex* (-scis), a gutter tile, from *imber*, rain.]  
 1. bent or hollowed like a roof or gutter tile.  
 2. in botany, lying over each other in regular order, like tiles on a roof, as the scales on the cup of some acorns; overlapping each other at the margins, without any involution, as leaves in the bud.

3. in decoration, overlapping, or represented as if overlapping; as, an imbricated pattern.  
**im bri cāte**, *v. t.*; imbricated, *pt., pp.*; imbricating, *ppr.* to place so as to overlap, or to make appear overlapped.  
**im bri cāte**, *v. i.* to overlap.

**im bri cā'tion**, *n.* 1. the state of being imbricated; particularly, a real or apparent overlapping, as of shingles.



2. in masonry, a structure, as tiling, wall, or the like, laid so as to break joints.  
 3. a concavity like that of a gutter tile.



**im brō cā'dō**, *n.* [im-, in or on, and Sp. *brocado*, brocade.] cloth of gold or of silver. [Obs.]

**im brōc'cā'tā**, *im brōc'cā'tā*, *n.* in fencing, a kind of thrust. [Obs.]

**im brōg'l'ō** (-brō'yō), *n.* [It., confusion, from *imbrogliare*, to confuse.]  
 1. a confused heap. [Rare.]  
 2. an involved and confusing situation; state of confusion and complication.

3. a confused misunderstanding or disagreement; entanglement.

**im brown'**, *v. t.* same as *embrown*.  
**im brūe'**, *v. t.*; imbrued, *pt., pp.*; imbruing, *ppr.* [ME. *imbrownen*; Ofr. *embruer*, to give to drink; L. *in-*, in, and *bibere*, to drink.]

1. to wet or moisten; to soak; to drench in a fluid, especially in blood.  
 Whose arrows in my blood their wings imbrue.  
 —Sandys.

2. to soak into. [Obs.]  
**im brū'ment**, *n.* the act of imbruing; the condition of being imbrued.

**im brūte'**, *v. t.*; imbruted, *pt., pp.*; imbruting, *ppr.* to degrade to the state of a brute; to reduce to brutality.

And mix with bestial slime  
 This essence to incarnate and imbrue.  
 —Milton.

**im brūte'**, *v. i.* to sink to the state of a brute.  
**im brūte'ment**, *n.* the act of degrading to the level of a brute; also, the state of being thus degraded.

**im būe'**, *v. t.*; imbued, *pt., pp.*; imbuing, *ppr.* [Ofr. *imbuer*; L. *imbuer*, to wet, soak.]

1. to fill with moisture; to saturate; imbrue.  
 2. to fill with color; to dye; stain; tinge.

3. to fill (the mind, etc.); permeate; pervade; inspire (with principles, feelings, emotions, etc.).

**im būe'ment**, *n.* the act of imbuing or the state of being imbued.

**im būse'**, *v. t.* [L. *in-*, in, and *bursa*, a purse.] to supply or stock with money. [Rare.]

**im būse'ment**, *n.* the act of supplying with money. [Rare.]

**im'id**, *n.* same as *imide*.  
**im'id az'ōl**, *n.* [from *imide*, and *azole*] a colorless, crystalline base, C<sub>6</sub>H<sub>5</sub>N<sub>3</sub>.

**im'idē**, *n.* [variant of *amide*] an organic compound containing the divalent radical NH.

**im'idō**, *a.* of an imide or imides.  
**im'idō-**, a combining form used in chemistry to denote substances which contain the radical NH, called the imido group.

**im'idō ac'id**, an organic acid formed by the union of one or more acid radicals with a compound of the imido group, in which the hydrogen is replaceable.

**im'idō gen**, *n.* [imido- and hydrogen] the divalent radical NH. [Rare.]

**im'ine**, *n.* [arbitrary alteration of *amine*] a compound containing the divalent radical NH united to alkyl or other nonacid radicals.

**im'ino**, *a.* of an imine or imines.  
**im'ino-**, [from *imine*] a combining form meaning of or containing the divalent radical NH united to alkyl or other nonacid radicals.

**im'ī tā bil'i ty**, *n.* the quality of being imitable.  
**im'ī tā ble**, *a.* [Fr. *imitable*; L. *imitabilis*, from *imitari*, to imitate.]

1. capable of being imitated or copied.  
 2. worthy of imitation. [Obs.]

**im'ī tā ble ness**, *n.* the quality of being imitable.

**im'ī tān cy**, *n.* the tendency to imitate. [Rare.]  
**im'ī tāte**, *v. t.*; imitated, *pt., pp.*; imitating, *ppr.* [L. *imitatus*, *pp.* of *imitari*, to imitate.]

1. to try to act or be the same as; to follow the example of; as, one should imitate the wise.  
 2. to act the same as; to mimic.  
 3. to reproduce in form, color, etc.; to make a duplicate of; copy; counterfeit.

## immantle

4. to be or become like in appearance; look like; resemble; as, glass is made to imitate diamonds.

5. to use as a model or pattern.  
 Syn.—copy, follow, mimic, ape, mock.

**im i tā'tion**, *n.* [L. *imitatio* (-onis), imitation, from *imitari*, to imitate.]

1. the act of imitating.  
 Poetry is an act of imitation, that is to say, a representation, counterfeiting, or figuring forth.  
 —Sidney.

2. that which is made or produced as a copy; likeness; resemblance; also, a counterfeit.

Both these arts are not only true imitations of nature, but of the best nature.  
 —Dryden.

3. in music, the repetition of essentially the same melodic idea, often with slight changes in rhythm, intervals, etc., by different parts or voices in a polyphonic composition.

4. in biology, mimicry.

**im-i tā'tion**, *a.* made to resemble something else, usually something superior or genuine; not real; sham; bogus; as, imitation leather.

**im-i tā'tion āl**, *a.* relating to imitation.

**im'ī tā'tive**, *a.* [L. *imitatus*, *pp.* of *imitari*, to imitate.]

1. inclined to imitate or follow in manner; as, man is an imitative being.

2. aiming at resemblance; employed in the art of creating resemblances; as, painting is an imitative art.

3. formed after a model, pattern, or original.

This temple, less in form, with equal grace,  
 Was imitative of the first in Thrace.  
 —Dryden.

4. in biology, designating an animal which makes use of imitation, as for concealment.

5. not genuine or real; imitation.

6. approximating in sound the thing signified; echoic; said of words (e.g., *hiss*, *ripple*, *clang*).

**im'ī tā'tive**, *n.* in grammar, a verb that expresses imitation. [Obs.]

**im'ī tā'tive-ly**, *adv.* in an imitative manner.

**im'ī tā'tōr**, *n.* [L. *imitator*, from *imitari*, to imitate.] one who or that which imitates.

**im'ī tā'tōr ship**, *n.* the office or state of an imitator.

**im'ī tā'tress**, *n.* a female imitator.

**im'ī tā'trix**, *n.* same as *imitatress*.

**im mac'ū lāte**, *a.* [ME. *immaculate*; L. *immaculatus*, unspotted; *in-* priv., and *maculatus*, *pp.* of *maculare*, to spot, soil.]

1. perfectly clean; without a spot or stain; unsoiled.

2. perfectly correct; without a flaw, fault, or error.

3. pure; innocent; without sin.

*Immaculate Conception*; a doctrine of the Roman Catholic Church, that the Virgin Mary was conceived without original sin, proclaimed as a dogma by Pope Pius IX in 1854, sometimes confused with *virgin birth*.

**im mac'ū lāte ly**, *adv.* in an immaculate manner; with spotless purity.

**im mac'ū lāte ness**, *n.* the quality or state of being immaculate; spotless purity.

**im māl'ēd'**, *a.* wearing mail or armor.

**im māl'ē ā ble**, *a.* not malleable; that cannot be extended by hammering. [Rare.]

**im man'ā cle**, *v. t.* to put manacles on; to fetter or confine; to restrain from free action. [Rare.]

**im mā nā'tion**, *n.* [L. *in*, into, and *manatus*, *pp.* of *manare*, to flow.] a flowing or entering in.

**im māne'**, *a.* [L. *immanis*, great, large.] vast; huge; very great; formidable; monstrous. [Archaic.]

**im māne'ly**, *adv.* monstrously; cruelly.

**im mā nence**, *im mā nen cy*, *n.* the state or condition of being immanent.

**im mā nent**, *a.* [L.L. *immanens* (-entis), *ppr.* of *immanere*, to remain in or near; L. *in*, in, and *manere*, to remain.]

1. living, remaining, or operating within; inherent.

2. in theology, present throughout the universe; said of God.

**im mā'nēs**, *n. pl.* [L. *pl.* of *immanis*, monstrous.] the *Dinorinthes*; an earlier name.

**im mān'ī fest**, *a.* hidden; not visible. [Rare.]

**im mān'ī ty**, *n.* [L. *immanitas*, hugeness, cruelty, from *immanis*, vast, huge.] monstrosity; the condition of being immane. [Obs.]

**im mān'tle**, *v. t.* to cover, as with a cloak or mantle.



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DOC DATE: 07/20/1998

ASSIGNEE:

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SERIAL NUMBER: 09123633

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4. Application number(s) or registration numbers(s):

If this document is being filed together with a new application, the execution date of the application is: July 20, 1998

A. Patent Application No. (s)

B. Patent No. (s)

09/123633

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5. Name and address of party to whom correspondence concerning document should be mailed

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## ASSIGNMENT

I, Leonard E. Mess of 4101 Cassia, Boise, Idaho 83705, have invented a method and apparatus entitled THERMALLY CONDUCTIVE INTERPOSER AND METHOD OF USE, hereinafter called the "invention."

Preferred embodiments of said invention are disclosed in a United States patent application executed concurrently herewith by me and now identified as File No. 11675.168 of the law firm of Workman, Nydegger & Seeley, 1000 Eagle Gate Tower, 60 East South Temple, Salt Lake City, Utah 84111, and filed in the United States Patent and Trademark Office as Serial No. 123,622 on 7/27/72. (I hereby authorize the attorneys of Workman, Nydegger & Seeley to insert said serial number and filing date when known.) The Assignee, Micron Technology, Inc., a corporation of the State of Delaware, having a principal place of business at 8000 South Federal Way, Boise, Idaho 83707-0006, desires to secure the entire right, title and interest in said invention.

For good and valuable consideration paid to me by the Assignee, the receipt and sufficiency of which I hereby acknowledge, I HEREBY ASSIGN TO THE ASSIGNEE:

The entire right, title and interest in said invention in the above-identified United States patent application and in all divisions, continuations and continuations-in-part of said application, or reissues or extensions of Letters Patent or Patents granted thereon, and in all corresponding applications filed in

countries foreign to the United States, and in all patents issuing thereon in the United States and Foreign countries.

The right to file foreign patent applications on said invention in its own name, wherever such right may be legally exercised, including the right to claim the benefits of the International Convention for such applications.

I hereby authorize and request the United States Commissioner of Patents and Trademarks, and such Patent Office officials in foreign countries as are duly authorized by their patent laws to issue patents, to issue any and all patents on said invention to the Assignee as the owner of the entire interest, for the sole use and behalf of the said Assignee, its successors, assigns and legal representatives.

I hereby agree, without further consideration and without expense to me, to sign all lawful papers and to perform all other lawful acts which the Assignee may request of me to make this Assignment fully effective, including, by way of example but not of limitation, the following:

Prompt execution of all original, divisional, substitute, reissue, and other United States and foreign patent applications on said invention, and all lawful documents requested by the Assignee to further the prosecution of any of such patent applications.

Cooperation to the best of my ability in the execution of all lawful documents, the production of evidence, nullification, reissue, extension, or infringement proceedings involving said invention.

This assignment and agreement shall be binding upon my heirs and legal representative.,

Dated this 20 day of July, 1998.

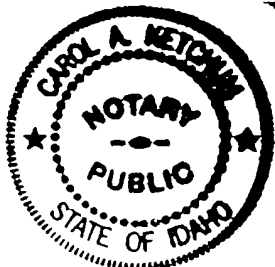
Leonard E. Mess  
Leonard E. Mess

STATE OF IDAHO )

: ss.

COUNTY OF ADA )

On July 20, 1998, before me personally appeared Leonard E. Mess, known to me to be the person described and who signed the foregoing Assignment in my presence and acknowledged under oath before me that he has read the same and knows the contents thereof and that he executed the same as his free act and deed and for the purposes set forth therein.



Carol A. Ketchum  
NOTARY PUBLIC  
Residing at 1629 E. Stadler  
Eagle, Id 83616

My Commission Expires:

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